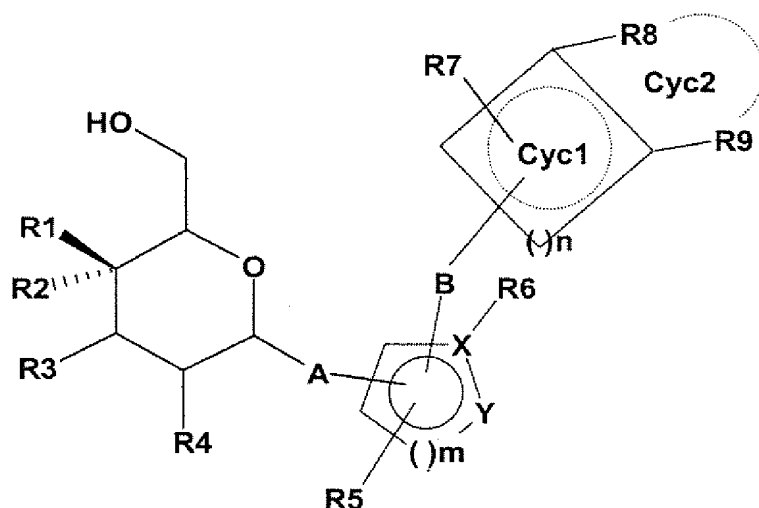


1. (currently amended) A compound of formula I



wherein

R1 and R2 are each independently F or H or one of said radicals R1 and R2 may be OH;

R3 is OH or F, with the proviso that at least one of the radicals R1, R2 and R3 must be F;

R4 is OH;

A is O, NH, CH₂, S or a bond;

X is C, O, S or N, with the proviso that X is C when Y is O or S;

Y is N, O or S;

m is 1 or 2;

R5 is hydrogen, F, Cl, Br, I, OH, CF₃, ~~NO₂, CN, COOH, CO(C₄-C₆)-alkyl, COO(C₄-C₆)-alkyl, CONH₂, CONH(C₄-C₆)-alkyl, CON[(C₄-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, HO-(C₁-C₆)-alkyl~~ **[[.]]** or (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, ~~phenyl, benzyl, (C₄-C₆)-alkoxycarboxyl,~~

wherein said ~~CO(C₄-C₆)-alkyl, COO(C₄-C₆)-alkyl, CONH(C₄-C₆)-alkyl, CON[(C₄-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, HO-(C₁-C₆)-alkyl~~ **[[.]]** and (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl and ~~(C₄-C₆)-alkoxycarboxyl~~ radicals are optionally substituted with one or more fluorine atoms **[[.]]**;

~~SO₂-NH₂, SO₂NH(C₄-C₆)-alkyl, SO₂N[(C₄-C₆)-alkyl]₂, S-(C₄-C₆)-alkyl,
S-(CH₂)_o-phenyl, SO-(C₄-C₆)-alkyl, SO-(CH₂)_o-phenyl, SO₂-(C₄-C₆)-alkyl,
SO₂-(CH₂)_o-phenyl,~~

~~wherein said SO₂NH(C₄-C₆)-alkyl, SO₂N[(C₄-C₆)-alkyl]₂, S-(C₄-C₆)-
alkyl, SO-(C₄-C₆)-alkyl and SO₂-(C₄-C₆)-alkyl radicals are optionally
substituted with one or more fluorine atoms, and wherein the phenyl
ring of said S-(CH₂)_o-phenyl, SO-(CH₂)_o-phenyl and
SO₂-(CH₂)_o-phenyl radicals is optionally mono- or disubstituted with F,
Cl, Br, OH, CF₃, NO₂, CN, OCF₃, O-(C₄-C₆)-alkyl, (C₄-C₆)-alkyl or
NH₂, and wherein o is 0, 1, 2, 3, 4, 5, or 6,~~

~~NH₂, NH-(C₄-C₆)-alkyl, N[(C₄-C₆)-alkyl]₂, NH(C₄-C₇)-acyl, phenyl or
O-(CH₂)_o-phenyl,~~

~~wherein the phenyl ring of said phenyl and O-(CH₂)_o-phenyl radicals is
optionally mono-, di-, or trisubstituted with F, Cl, Br, I, OH, CF₃, NO₂,
CN, OCF₃, O-(C₄-C₆)-alkyl, (C₄-C₆)-alkyl, NH₂, NH(C₄-C₆)-alkyl,
N[(C₄-C₆)-alkyl]₂, SO₂-CH₃, COOH, COO-(C₄-C₆)-alkyl or CONH₂,
and wherein o is as hereinabove defined;~~

or, when Y is S, R5 and R6 taken together with the carbon atoms to which
they are attached may form a phenyl ring;

R6 is H[[,]] or (C₁-C₆)-alkyl, (C₄-C₆)-alkenyl, (C₃-C₆)-cycloalkyl, or phenyl
wherein said phenyl radical is optionally substituted with halogen or (C₄-C₄)-
alkyl;

B is (C₀-C₁₅)-alkanediyl, wherein one or more of the carbon atoms in said
alkanediyl radical may be replaced, independently of one another, with O,
-(C=O), -CH=CH-, -C≡C-, -S-, -CH(OH)-, -CHF-, -CF₂-, -(S=O)-, -(SO₂)-,
-N[(C₄-C₆)-alkyl]-, -N[(C₄-C₆)-alkyl-phenyl]- or -NH-CH₂- or -CO-NH-CH₂-;

n is [[0, 1,]] 2[[,]] or 3 [[or 4]];

Cyc1 is a [[3-, 4-,]] 5-[[,]] or 6- [[or 7-]]membered saturated, partially saturated or
unsaturated ring, wherein one carbon atom of said ring may be replaced by
[[O, N or]] S;

R7, R8, and R9 are each independently hydrogen, F, Cl, Br, I, OH, CF₃, NO₂, CN, COOH,
GOO(C₄-C₆)-alkyl, CO(C₄-C₄)-alkyl, CONH₂, CONH(C₄-C₆)-alkyl,
CON[(C₄-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₈)-
alkoxy, HO-(C₁-C₆)-alkyl[[,]] or (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl,
wherein said GOO(C₄-C₆)-alkyl, CO(C₄-C₄)-alkyl, CONH(C₄-C₆)-alkyl,
CON[(C₄-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl,
(C₁-C₈)-alkoxy, HO-(C₁-C₆)-alkyl and (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl
radicals are optionally substituted with one or more fluorine atoms,

~~SO₂-NH₂, SO₂NH(G₄-G₆)-alkyl, SO₂N[(G₄-G₆)-alkyl]₂, S-(G₄-G₆)-alkyl,
S-(CH₂)_o-phenyl, SCF₃, SO-(G₄-G₆)-alkyl, SO-(CH₂)_o-phenyl, SO₂-(G₄-G₆)-
alkyl, SO₂-(CH₂)_o-phenyl,~~

~~wherein said SO₂NH(G₄-G₆)-alkyl, SO₂N[(G₄-G₆)-alkyl]₂, S-(G₄-G₆)-
alkyl, SO-(G₄-G₆)-alkyl and SO₂-(G₄-G₆)-alkyl radicals are optionally
substituted with one or more fluorine atoms, and wherein the phenyl
ring of said S-(CH₂)_o-phenyl, SO-(CH₂)_o-phenyl and
SO₂-(CH₂)_o-phenyl radicals is optionally mono- or disubstituted with F,
Cl, Br, OH, CF₃, NO₂, CN, OCF₃, O-(G₄-G₆)-alkyl, (G₄-G₆)-alkyl or
NH₂, and wherein o is as hereinabove defined,~~

~~NH₂, NH-(G₄-G₆)-alkyl, N((G₄-G₆)-alkyl)₂, NH(G₄-G₇)-acyl, phenyl or
O-(CH₂)_o-phenyl,~~

~~wherein the phenyl ring of said phenyl and O-(CH₂)_o-phenyl radicals is
optionally mono-, di-, or trisubstituted with F, Cl, Br, I, OH, CF₃, NO₂,
CN, OCF₃, (G₄-G₈)-alkoxy, (G₄-G₆)-alkyl, NH₂, NH(G₄-G₆)-alkyl,
N((G₄-G₆)-alkyl)₂, SO₂-CH₃, COOH, COO-(G₄-G₆)-alkyl or CONH₂,
and wherein o is as hereinabove defined;~~

or R8 and R9 taken together with the carbon atoms to which they are attached form a
5-~~[[,]]~~ or 6- or 7- membered, saturated, partially saturated or completely unsaturated
ring herein referred to as Cyc2,

wherein one ~~or two~~ carbon atom~~[[s]]~~ in said Cyc2 ring ~~[[are]]~~ is
optionally replaced by ~~[[N,]]~~ O or S, and wherein said Cyc2 ring is
optionally substituted with (C₁-C₆)-alkyl, ~~(G₂-G₅)-alkenyl or (G₂-G₅)-
alkynyl,~~

~~wherein said (G₄-G₆)-alkyl, (G₂-G₅)-alkenyl and (G₂-G₅)-alkynyl
radicals are optionally substituted with F, Cl, OH, CF₃, NO₂,
CN, COO(G₄-G₄)-alkyl, CONH₂, CONH(G₄-G₄)-alkyl or OCF₃,
and wherein a -CH₂- group contained in said (C₁-C₆)-alkyl,
(G₂-G₅)-alkenyl and (G₂-G₅)-alkynyl radical~~[[s]]~~ is optionally
replaced by -O-;~~

and pharmaceutically acceptable salts thereof.

2. (currently amended) The compound of Claim 1 wherein:

R1 and R2 are each independently F or H ~~or one of said radicals R1 and R2 may be OH,~~
with the proviso that at least one of said radicals R1 and R2 is F;

R3 is OH;

R4 is OH;

A is O ~~[[or NH]]~~;

- X is C, O or N, with the proviso that X is C when Y is S;
- Y is N or S;
- m is 1 or 2;
- R5 is hydrogen, F, Cl, Br, I, OH, CF₃, ~~NO₂, CN, COOH, CO(C₄-C₆)-alkyl, GOO(C₄-C₆)-alkyl, CONH₂, CONH(C₄-C₆)-alkyl, CON[(C₄-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, HO-(C₁-C₆)-alkyl[[,]] or (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, phenyl, benzyl or (C₁-C₆)-alkoxycarboxyl,~~
 wherein said ~~CO(C₄-C₆)-alkyl, GOO(C₄-C₆)-alkyl, CONH(C₄-C₆)-alkyl, CON[(C₄-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy, HO-(C₁-C₆)-alkyl[[,]] and (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxycarboxyl and SO-(C₄-C₆)-alkyl radicals~~ are optionally substituted with one or more fluorine atoms,
- or when Y is S, R5 and R6 taken together with the carbon atoms to which they are attached may form a phenyl ring;
- R6 is H[[,]] or (C₁-C₆)-alkyl, ~~(C₄-C₆)-alkenyl, (C₃-C₆)-cycloalkyl, or phenyl wherein said phenyl radical is optionally substituted with halogen or (C₄-C₄)-alkyl;~~
- B is ~~(C₀-C₁₅)-alkanediyl, wherein one or more of the carbon atoms in said alkanediyl radical may be replaced, independently of one another, with -O-, -(C=O)-, CH=CH-, C=C-, S-, CH(OH)-, CHF-, CF₂-, (S=O)-, (SO₂)-, -N((C₄-C₆)-alkyl)-, N((C₄-C₆)-alkyl-phenyl)- or -NH- -CH₂- or -CO-NH-CH₂-;~~
- n is [[0, 1,]] 2[[,]] or 3 [[or 4]];
- Cyc1 is a [[3-, 4-,]] 5-[[,]] or 6- [[or 7]]-membered ~~saturated~~, partially saturated or unsaturated ring, wherein one carbon atom of said ring may be replaced by [[O or]] S;
- R7, R8, and R9 are each independently hydrogen, F, Cl, Br, I, OH, CF₃, ~~NO₂, CN, COOH, GOO(C₄-C₆)-alkyl, CO(C₄-C₄)-alkyl, CONH₂, CONH(C₄-C₆)-alkyl, CON[(C₄-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₈)-alkoxy, HO-(C₁-C₆)-alkyl[[,]] or (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, S-(C₄-C₆)-alkyl, CF₃ or SO-(C₄-C₆)-alkyl,~~
 wherein said ~~GOO(C₄-C₆)-alkyl, CO(C₄-C₄)-alkyl, CONH(C₄-C₆)-alkyl, CON[(C₄-C₆)-alkyl]₂, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₈)-alkoxy, HO-(C₁-C₆)-alkyl[[,]] and (C₁-C₆)-alkyl-O-(C₁-C₆)-alkyl, S-(C₄-C₆)-alkyl and SO-(C₄-C₆)-alkyl radicals~~ are optionally substituted with one or more fluorine atoms,

or R8 and R9 taken together with the carbon atoms to which they are attached form a 5-~~[[,]]~~ or 6- ~~[[or 7-]]~~ membered, ~~saturated~~, partially saturated or completely unsaturated ring herein referred to as Cyc2,

wherein one ~~or two~~ carbon atom~~[[s]]~~ in said Cyc2 ring is optionally replaced by ~~[[N,]]~~ O or S, and wherein said Cyc2 ring is optionally substituted with (C₁-C₆)-alkyl, ~~(C₂-C₅)-alkenyl or (C₂-C₅)-alkynyl,~~

~~wherein said (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl and (C₂-C₅)-alkynyl radicals are is optionally substituted with F, Cl, OH, CF₃, NO₂, CN, COO(C₁-C₄)-alkyl, CONH₂, CONH(C₁-C₄)-alkyl or OCF₃, and wherein a -CH₂- group contained in said (C₁-C₆)-alkyl, (C₂-C₅)-alkenyl and (C₂-C₅)-alkynyl-radical[[s]] is optionally replaced by -O-.~~

3. (original) The compound of Claim 1 wherein the sugar residues are beta(β)-linked and the stereochemistry in the 2, 3 and 5 position of the sugar residue has the D-glucose configuration.

4. (currently amended) The compound of Claim 1 wherein:

R1 and R2 are each independently F or H ~~or one of said radicals~~ R1 and R2 may be OH, with the proviso that at least one of said radicals R1 and R2 is F;

R3 is OH;

R4 is OH;

A is O;

X is C, O or N, with the proviso that X is C when Y is S;

Y is N or S;

m is 1;

R5 is hydrogen, ~~F, Cl, CF₃, OCF₃, COO(C₁-C₄)-alkyl, (C₁-C₅)-alkyl, (C₂-C₄)-alkenyl, (C₂-C₄)-alkynyl, (C₁-C₄)-alkoxy, HO-(C₁-C₄)-alkyl[[,]] or (C₁-C₄)-alkyl-O-(C₁-C₄)-alkyl, phenyl, benzyl, (C₄-C₄)-alkoxycarbonyl, OCH₂CF₃ or (C₄-C₄)-alkyl-CF₂,~~

or when Y is S, R5 and R6 taken together with the carbon atoms to which they are attached may form a phenyl ring;

R6 is H~~[[,]]~~ or (C₁-C₆)-alkyl, ~~(C₄-C₆)-alkenyl, (C₃-C₆)-cycloalkyl, or phenyl~~ wherein said phenyl radical is optionally substituted with halogen or (C₄-C₄)-alkyl;

B is (C₄-C₄)-alkanediyl, ~~wherein one carbon atom in said alkanediyl radical may be replaced with -O-, (C=O)-, CH(OH)-, CHF-, CF₂-, -CH₂- or -CO-NH-CH₂-;~~

n is 2 or 3;

Cyc1 is an unsaturated 5- or 6-membered ring, wherein one carbon atom of said ring may be replaced by **[[O or]]** S;

R7, R8, and R9 are each independently hydrogen, F, Cl, Br, I, OH, (C₁-C₄)-alkyl, OCH₂CF₃, (C₁-C₈)-alkoxy, HO-(C₁-C₆)-alkyl, (C₁-C₄)-alkyl-O-(C₁-C₄)-alkyl, ~~S-(C₄-C₄)-alkyl, SCF₃ or OCF₃,~~

or R8 and R9 taken together form the radicals -C=CH-O-,

-CH=CH-S- or -CH=CH-CH=CH- and, with the carbon atoms to which they are attached, form an unsaturated or partially saturated 5- or 6-membered ring, said ring being optionally substituted by (C₁-C₄)-alkoxy ~~or -O-(CH₂)_p-O- wherein p is 1 or 2.~~

5. (currently amended) The compound of Claim 1 wherein:

R1 and R2 are each independently F or H,
with the proviso that at least one of said radicals R1 and R2 is F;

R3 is OH;

R4 is OH;

A is O;

X is C and Y is S, or
is O and Y is N, or
is N and Y is N;

m is 1;

R5 is hydrogen, CF₃, (C₁-C₆)-alkyl, or when Y is S, R5 and R6 taken together with the carbon atoms to which they are attached may form a phenyl ring,

R6 is H**[[,]]** or (C₁-C₄)-alkyl ~~or phenyl~~;

B is -CH₂-, ~~-C₂H₄-, -C₃H₆-,~~ or -CO-NH-CH₂- ~~or -CO-CH₂-CH₂-~~;

n is 2 or 3;

Cyc1 is an unsaturated 5- or 6-membered ring, wherein one carbon atom of said ring may be replaced by S;

R7, R8, and R9 are each independently hydrogen, F, Cl, Br, I, (C₁-C₆)-alkyl, (C₁-C₄)-alkoxy, ~~S-(C₄-C₄)-alkyl, SCF₃ or OCF₃,~~

or R8 and R9 taken together form the radicals -C=CH-O- or -CH=CH-CH=CH- and, with the carbon atoms to which they are attached, form an unsaturated or partially saturated 5- or 6-membered ring, said ring being optionally substituted by (C₁-C₄)-alkoxy.

6. (original) The compound of Claim 1 wherein:

R1 and R2 are each independently F or H,
with the proviso that at least one of said radicals R1 and R2 is F;

R3 is OH;

R4 is OH;

A is O;

X is C and Y is S, or
is N and Y is N;

m is 1;

R5 is hydrogen, CF₃, (C₁-C₆)-alkyl, or when Y is S, R5 and R6 taken together with the carbon atoms to which they are attached may form a phenyl ring,

R6 is H or (C₁-C₄)-alkyl;

B is -CH₂- or -CO-NH-CH₂-;

n is 2 or 3;

Cyc1 is phenyl or thiophene;

R7, R8, and R9 are each independently hydrogen or Cl,

or R8 and R9 taken together with the carbon atoms to which they are attached, form a furan ring or a phenyl ring optionally substituted with methoxy.

7. (original) A pharmaceutical composition comprising a compound of Claim 1 and a pharmaceutically acceptable carrier.

8. (canceled).

9. (withdrawn) A method of treating type 1 or type 2 diabetes which comprises administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 1.

10. (withdrawn) A method of lowering blood glucose which comprises administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 1.

11. (withdrawn) A method of treating type 1 or type 2 diabetes which comprises administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 1 with at least one other blood glucose-lowering active ingredient.

12. (withdrawn) A method of lowering blood glucose which comprises administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 1 with at least one other blood glucose-lowering active ingredient.